NORTHERN Gardener
CREATING & CARING FOR YOUR ENVIRONMENT
MNLA Minnesota Nursery & Landscape Association

Water Gardening

Water gardening is increasingly becoming a favorite activity for many backyard gardeners. The inviting art of water gardening has been understood by the Japanese for a thousand years: The creation of a restful corner or retreat.

Many landscape contractors can install a pond for you very economically. If you have a pond professionally installed, see the back side of this sheet for plant recommendations.

CARING FOR YOUR ENVIRONMENT

✔ Many new varieties of annual and perennial water plants are available at MNLA garden centers. However, it is a bad environmental practice and against the law to plant non-native species in lakes, or even in ponds that have streams leading to lakes. Non-native water plants should be used only in self-contained ponds or pools.

Installing Your Own Pond

One of the best things that has happened to water gardening in recent years is the new methods and materials available for pond construction. PVC liners are an excellent alternative to cement construction, which can heave or crack in severe cold. Another alternative is butyl rubber liners. They last a lifetime. Also, you can have an almost instant water garden by using a half barrel or tub. You will not need any elaborate pipework, plumbing, drains or sump boxes.

You may want to consider your source of electricity while you are in the building stage. All electrical pool equipment will need to be grounded with three-prong outlets. An electrician or building supplier can help you with this.

Calculating the Liner Size

The size of the liner required for a pool, regardless of shape and the size or the position of the marginal shelves, is determined by this simple formula: Length of the liner is the overall length of the pool plus twice the maximum depth. Width of the liner is the overall width of the pool, also plus twice the maximum depth.

Installing the Pool Liner

Step 1. Locate the pool where it will receive at least 8 to 10 hours of sunlight per day. This will give you the widest variety of plants for your pool.

Step 2. Begin to excavate a hole for your pool. Dig the excavation at least 18 inches deep with the sides sloping outwards with an angle of 15-20 degrees. The marginal shelf should provide a depth of 9-12 inches but, of course, need not run around the entire side of the pool. This shelf is used to place potted bog plants on. The floor should have a 2% slope to one end for draining and clean-out purposes. Be sure the pond rim is absolutely level from side to side and end to end. If it is not level, the liner will show on the "high" side. Any sharp stones or other protrusions should be removed from

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the hole and the interior surface of the excavation should be made smooth and lined with a pond underlayment, carpet pad or a 2 inch thick layer of sand. If sand is dampened, it will hold satisfactorily to the sides of the pool. Newspaper can also be used.

Step 3. Introduction of the liner to the excavation. The liner should be centered and stretched as tautly as possible over the hole and anchored around its edge by bricks or rocks. The stones should be evenly distributed and should not overhang.

Step 4. Start running water into the liner; the weight of the water will take the liner into the hole, partly by stretching it and partly by drawing in the anchor stones - which is why they should not overhang the hole. Wrinkles in the liner material will disappear as the pool fills. You will have to fold and pull the liner in some places to keep it as wrinkle free as possible.

Step 5. Surplus liner material can then be trimmed using scissors, leaving about 6 inches in width around the rim; the edges can be nicked with the scissors where folds occur to make certain that the material lies flat to the ground.

Step 6. The perimeter of the pool can be finished as desired - perhaps using paving stone or something similar. The slabs should overhang the pool's edge by at least 2 inches to conceal the flap of the liner. The pool should be constantly topped off and maintained at a level whereby the water is never allowed to evaporate to more than 1 inch below the underside of the edging. Edging may also be made with occasional stones intermingled with low growing perennials.

Culture of Water Plants

WATER LILIES

Containers: The ideal container is about 10 to 12 inches round and about 10 inches deep, although, you can get by with something a little smaller - you need at least a cubic foot of earth.

Soil: Use a good, firm garden loam and enrich according to the following suggestions:

Do not add peat moss, leaf mold or compost to the soil. Do not use commercial potting mixes. A good soil mix would be 4 parts well decomposed garden loam to 1 part sand.

Fertilizers: Well-rotted cow manure, one part to three parts of garden soil is very good. If you use commercially dried cow manure, use it more sparingly, at a ratio of one part to eight or ten parts of soil, or four quarts to one bushel of soil.

Never use fresh manure of any kind. It will sour the soil it is put into, color pool water to a point of unsightliness and probably promote a quick and heavy growth of green slime. If tablets are used, use only ones labeled for use in water gardens. These are time released and are an easy way of maintaining nutrient levels. Also, you can use the various commercial fertilizers offered by most dealers. Use a 10-10-10 mixture (10 units of nitrogen, 10 of super-phosphate and 10 of potash). Use 5 to 10 grams of fertilizer with every 1 gallon of soil volume. Make sure that the fertilizers do not contain any copper.

Choosing a lily: Mini Lilies come in all colors and have flower 1 to 2 inches in diameter. Hardy lilies come in red, yellow, white and pink and these go dormant and can be stored in plastic bags at 45° F through the winter. Tropical lilies come in red, yellow, white, pink and blue and blooms are more prolific. These plants do not go dormant and will grow tubers.

Planting The Lilies: Plant the water lily with the growing tip extended above the surface of the soil. Cover the soil surface in the container with sand, finely crushed stone or gravel, but keep this away from the growing tip. This top layer will keep goldfish from disturbing the soil and thus clouding the pool.

If the stems of the lily you are planting are fairly well developed, set the container in the pool so that 8 to 18 inches of water covers the crown. If the leaves lack an inch or so from reaching the water surface, don't worry about them. They will adjust themselves to their water depth within a few days. However, if growth has just begun to develop, prop up the container so that only a few inches of water cover the point. There the warmth of the sun will easily penetrate the water to stimulate growth. After a week, as stems and leaves develop, the plant can be dropped down to the full depth.

POND EMERGENT PLANTS

Floating plants: Need no pots or soil and effectively filter the water.

Submerged plants or oxygengenators: These help maintain clear water by competing with algae for nutrients.